REMARKS

Claims 1-4 and 6 are pending in the present application. Claims 1-4 and 6 are rejected under 35 U.S.C. §102(b) as anticipated by Walker et al., U.S. Patent No. 4,936,862. Claim 6 is rejected under 35 U.S.C. §103(a) as anticipated by Eufinger et al., U.S. Patent No. 5,798,924.

Applicants respectfully traverse the rejection of the claims. Independent claim 1 recites, in part:

> generating a virtual three-dimensional model from image data of at least the patient's implant area and the environment thereof, comparing the virtual three-dimensional model to real medical reference data, selecting from the real medical reference data a set of said reference data best suited for the patient and forming a reference model object therefrom, generating a virtual implant model from said reference model object, and manufacturing the implant by computer numeric control based on data from the virtual implant model.

These limitations are not taught or suggested by the cited art. For instance, the Walker et al. reference fails to anticipate generating a virtual 3-D image of at least the patient's implant area and the surrounding environment. Rather, the Walker et al. reference merely uses tomography or radiographs to determine the size and shape of the corresponding bone when it is determined that an implant for a femur or other bone is required. In Walker et al., the first step of the method

does not provide a true-to-nature model corresponding to the patient. The model obtained by Walker only includes features of an average bone as being owned by other comparable human beings. Then, this model, by comparing operations, serves as a pattern design for the prosthesis. The specific features of the bone structure of the patient are not detected as in the present invention. Thus, Walker et al. does not teach a method according to the present invention.

The Eufinger et al. reference fails to render the claimed invention obvious. This reference fails to teach selecting from the real medical reference data set of said reference data best suited for the patient and forming a reference model object therefrom.

Eufinger et al. transforms data of a desired model (reference model) and a model of actual patient in spline functions based on supporting points. This resembles a convention interpolation where, the models represented by a few points and corresponding approximation functions. The models obtained are visualized there in superposition.

By displacement of the supporting points at the limiting faces of the models, the adaptation of the prothesis is carried out by taking back partial areas of the

intersections of "existing bone models" of a patient [which according to claim 1 is obtained from a record of an 'existing bone structure" of a patient by computer tomography] towards the volume of the "reference model." The displacement of the supporting points is carried out merely visually and, hence, is reproducible only in a few cases. According to Eufinger, the final form of the prosthesis is obtained by subtraction of the adapted real model and the initial desired model.

Accordinlgy, as the cited art fails to teach or suggest the claimed invention, it is respectfully requested that all rejections under 35 U.S.C. §102(b) and §103(a) be withdrawn.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited. Please charge any deficiency or credit any overpayment to Deposit Account No. 10-1250.

Respectfully submitted,
JORDAN AND HAMBURG LLP

By C. Bruce Hamburg/
C. Bruce Hamburg
Reg. No. 22,389
Attorney for Applicants

and,

by

By Jacqueline M. Steady
Jacqueline M. Steady
Reg. No. 44,354
Attorney for Applicants

Jordan and Hamburg LLP
122 East 42nd Street
New York, New York 10168
(212) 986-2340